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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,079	03/16/2006	Masayuki Matuda	0810470.0104	9774

545 7590 02/04/2009

IP Patent Docketing
K&L GATES LLP
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EXAMINER	
WOLDEMARIAM, AKILILU K	

ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
02/04/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/572,079	MATUDA ET AL.	
	Examiner	Art Unit	
	AKLILU k. WOLDEMARIAM	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 March 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/28/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 09/28/2006 was filed after the mailing date of 09/28/2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035

3. Claims 1, 6, 8 and 10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 1, 6, 8 and 10 defined as software claims embodying functional descriptive material (i.e., a computer program or computer executable code). However, the claim does not define a

"computer-readable medium or computer-readable memory" and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). The scope of the presently claimed invention encompasses products that are not necessarily computer readable, and thus NOT able to impart any functionality of the recited program. The examiner suggests amending the claim(s) to embody the program on "computer-readable medium" or equivalent; assuming the specification does NOT define the computer readable medium as a "signal", "carrier wave", or "transmission medium" which are deemed non-statutory (refer to "note" below). Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4-5 and 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example claim 4, claim limitation, lines 1-2, "*the recognition code and recognition code sheet of claims 1 to 3 in which part of the combined element cell is made to be a function code.*" *It is not clear that claim 4 depends on 1 or 2 or 3. Therefore, the claim limitation is indefinite. Examiner rejected claims 5 and 13-14 for above similar or identical reasons.*

Claim Objections

6. Claims 1-14 are objected to because of Applicant claimed recognition code and recognition code sheet as single invention. Claims examined as best understood by Examiner because recognition code and recognition code sheet are different inventions.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ackley (U.S. Patent number 5, 811,781).

Regarding claim 1, *[clam examined as best understood by examiner], Ackley discloses* Recognition code and recognition code sheet characterized in that information is expressed by an element cell composed of a single element from El to E, or a combination of elements E1 to En, an element cell or space that is not peripheral information thereto is taken to be a non-element, and said non-element cell has a function *(see column 21, lines 34-45 and column 25, lines 42-44, further the sum of the elements in the stop character is 7, which is still an integer divisor of 21. Finally, the pattern is easily discernible in an out-of-focus reading conditions and combined elements referred to sum elements).*

Regarding claim 2, *Ackley discloses* the recognition code and recognition code sheet of claim 1 characterized in that one element cell is made to be zero information

(see item 168, fig.7 and column 21, line 46-column 22, line 5, The CPU 144 analyzes the signals produced by the bar code reader 142 for symbol characters to determine whether the CPU can recognize the wide elements but fail to recognize the wide elements. If the CPU 144 can not recognize the one-wide elements in one or more symbol characters, the CPU aborts the decode routine, provides unfocused data to be CPU and not recognize the one-wide elements in one or more symbol character referred to zero information).

Regarding claim 3, *Ackley discloses* recognition code and recognition code sheet of claim 1 or 2, characterized by combining element cell and non-element cell *(see column 21, lines 34-45 and column 25, lines 42-44, further the sum of the elements in the stop character is 7, which is still an integer divisor of 21. Finally, the pattern is easily discernible in an out-of-focus reading conditions).*

Regarding claim 4, *[Claim examined as best understood by examiner], Ackley discloses* the recognition code and recognition code sheet of claims 1 to 3, in which part of the combined element cell is made to be a function code (*see column 25, lines 42-44, further the sum of the elements in the stop character is 7, which is still an integer divisor of 21. Finally, the pattern is easily discernible in an out-of-focus reading conditions).*

Regarding claim 5, *[claim examined as best understood by examiner], Ackley discloses* the recognition code and recognition code sheet of claims 1 to 3 in which an element cell in which a set of element cells that combine El to En elements is made to be saturated element cell Bs, a set is made to be function element cell B'o, non-element cell Bo, characterized by an element cell combination in which saturated element cell Bs

is made to be zero information, and function element cell B'o and non-element cell Bo are made to be function codes *(see item 168, fig.7 and column 21, line 46-column 22, line 5, The CPU 144 analyzes the signals produced by the bar code reader 142 for symbol characters to determine whether the CPU can recognize the wide elements but fail to recognize the wide elements. If the CPU 144 can not recognize the one-wide elements in one or more symbol characters, the CPU aborts the decode routine, provides unfocused data to be CPU and not recognize the one-wide elements in one or more symbol character referred to zero information).*

Regarding claim 6, *[claim examined as best understood by examiner], Ackley discloses* a recognition code and recognition code sheet in which an expression of a cell of El, E2 elements in which a basic numeral of a binary or ternary unit cell is made to be the E1 element, and a negative equi-multiple of the basic numeral is made to be the E2 element, characterized by an element cell combination in which cell numeral information is expressed by the El, E2 elements, zero information by the saturated element Bs, and non-element Bo is made to be a function code *(see item 168, fig.7 and column 21, line 46-column 22, line 5, The CPU 144 analyzes the signals produced by the bar code reader 142 for symbol characters to determine whether the CPU can recognize the wide elements but fail to recognize the wide elements. If the CPU 144 can not recognize the one-wide elements in one or more symbol characters, the CPU aborts the decode routine, provides unfocused data to be CPU and not recognize the one-wide elements in one or more symbol character referred to zero information).*

Regarding claim 7, *Ackley discloses* the recognition code and recognition code sheet described in claim 6 in which the E2 element is made to be twofold the basic numeral *(see column 6, lines 45-52, an encoding method includes the steps of: determining a character code having at least 16 bits for selected character, converting the character code to a bar code and printing a bar code symbol corresponding to the bar code. The step of converting the 16-bit character code to a bar code from either a look-up table or generating it via algorithm).*

Regarding claim 8, *[claim examined as best understood by examiner], Ackley discloses* a recognition code and recognition code sheet in which an expression of a cell of E21, E22, Ez3 elements when the basic numeral of a septenary unit cell is made to be the E21 element, twofold the basic numeral is made to be the E22 element, and fourfold the basic numeral is made to be the E23 element, characterized by an element cell combination in which an element that combines all the E21, E22, E23 elements is made to be saturated element cell Bs, a non-element cell is made to be Bo, cell numeral information is expressed by E21, E22, E23 and combined elements of two types, zero information by saturated element Bs, and non-element Bo is made to be a function code *(see column 6, lines 45-52, an encoding method includes the steps of: determining a character code having at least 16 bits for selected character, converting the character code to a bar code and printing a bar code symbol corresponding to the bar code. The step of converting the 16-bit character code to a bar code from either a look-up table or generating it via algorithm).*

Regarding claim 9, *Ackley discloses* the recognition code and recognition code sheet described in claim 8 in which the E23 element is made to be negative threefold the basic numeral *(see column 21, line 34-column 22, lines 6, negative threefold is well know to ordinary skill in the art).*

Regarding claim 10, *Ackley discloses* a recognition code and recognition code sheet in which an expression of a cell of E2b E22, E23 elements when the basic numeral of a senary unit cell is made to be the E23 element, twofold the basic numeral is made to be the E22 element, threefold the basic numeral is made to be the E23 element, characterized by an element cell combination in which an element that combines all the E21, E22, Ez3 elements is made to be saturated element cell Bs, an element cell that combines E21 and E22 is made to be B'o, a non- element cell is made to be Bo, cell numeral information is expressed by a combination of two types of elements excluding E21, E22, E23 and B'o, zero information by saturated element Bs, and element cell Bo and non-element cell Bo are made to be function codes *(see column 21, line 34-column 22, lines 61, combine elements referred to sum elements, however, Examiner did not understand what B'o, B"o and B"o, please explain them).*

Regarding claim 11, *Ackley discloses* the recognition code and recognition code sheet described in claim 10 characterized by an element cell combination in which the element cell that combines E21, E22 is made to express zero information, and saturated element cell Bs is made to be a function code (*see column 25, lines 42-44, further the sum of the elements in the stop character is 7, which is still an integer divisor*

of 21. Finally, the pattern is easily discernible in an out-of-focus reading conditions and combined referred to sum).

Regarding claim 12, *Ackley discloses* the recognition code and recognition code sheet described in claim 10 characterized by an element cell combination in which the E21, E22 combined element cell in the senary unit cell is a quinary element cell combination that is made to be function code B"o, and B'o, B"o, non-element Bo are made to be function codes *(see column 21, line 34-column 22, lines 61, combine elements referred to sum elements, however, Examiner did not understand what B'o, B"o and B"o, please explain them).*

Regarding claim 13, *[Claim examined as best understood by examiner] Ackley discloses* the recognition code and recognition code sheet of claim 1, 2 characterized by an element cell combination having a code structure that divides parts of graphics or characters into element cells and non-element cells *(see column 21, lines 34-45 and column 25, lines 42-44, further the sum of the elements in the stop character is 7, which is still an integer divisor of 21. Finally, the pattern is easily discernible in an out-of-focus reading conditions).*

Regarding claim 14, *[Claim examined as best understood by examiner] , Ackley discloses* the recognition code and recognition code sheet according to claim 1, 2 characterized by an element cell combination in which the plurality of elements from El to En and elements combined for information are made to be an element cell combination having an intensity structure of light reflectance by hue or concentration and density (see *column 21, lines 34-45 and column 25, lines 42-44, further the sum of*

the elements in the stop character is 7, which is still an integer divisor of 21. Finally, the pattern is easily discernible in an out-of-focus reading conditions and column 10, lines 52-63, since 65, 536 of the symbol characters are employed to encode the Unicode character codes, and 11, 000 are employed to encode high density numerics , 3,470 symbol employed for double density alphanumeric characters to further improve the information density of the present symbology).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AKLILU k. WOLDEMARIAM whose telephone number is (571)270-3247. The examiner can normally be reached on Monday-Thursday 6:30 a.m-5:00 p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner
Art Unit 2624

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